

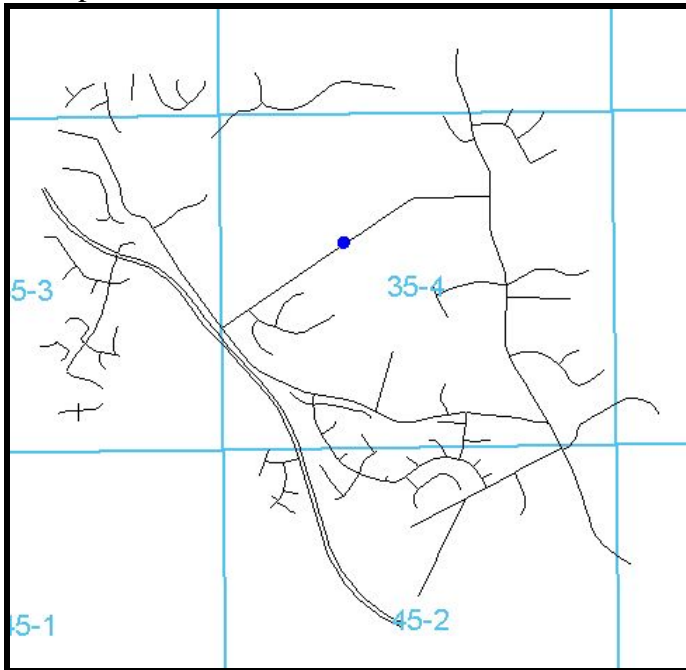
## Site & Entrance Permits

### METHOD #1 – POINT FILE

#### 1. GIS REQUIREMENT:

- a) Submit a GIS or CAD file showing the proposed work location. This is a “single point drawing” indicating the location of your project. **Note: It is not a digital version of your plan/drawing sheets.**
- b) Media type: 3.5” floppy or CD-ROM in Windows format
- c) File Types:
  - ESRI shapefile (**preferred**). Include the SHP, DBF, and SHX files.
  - DXF
  - Microstation DGN
  - DWG files of *Release 14 or lower*
- d) All files must be referenced to:
  - Virginia State Plane Coordinate System (not Latitude/Longitude)
  - North Zone
  - Datum: NAD1983
  - Units: U.S. Survey Feet

Example: the “dot” is what should be delivered to VDOT



#### How to meet this GIS Requirement:

It is easiest to meet the requirement described in Method 1 by drawing your point over top of street data which is already geo-referenced to the specified coordinate system.

- Load the data into your CAD/GIS software
- Find your work location
- Draw your point

- Save that point in one of the formats specified above and send it in on a diskette with your Permit Application.
- Label your diskette with the name of your file and the file extension such as .TXT, .DXF, .SHP etc

You can obtain this street data from the Fairfax County GIS Office for \$75 (<http://www.co.fairfax.va.us/maps/cd.htm>). This data contains street names (as attributes) which makes it easy to find your work locations. Other useful layers are included on this disk including Tax Map Grids. The data format is an ESRI “coverage” and requires Arcview, ArcExplorer or other software which can read a “coverage”. **Note:** A copy of ArcExplorer is provided with this data CD. More current and advanced versions of ArcExplorer are available for free at <http://www.esri.com/software/arcexplorer/index.html>. Versions 2.0 or 3.1 are recommended.

If you use CAD software, you will need to convert the street data into a DXF, DWG, or something similar that your CAD program can read. Many converters exist in the GIS/CAD marketplace, such as Blue Marble Geographics’ “GeoTranslator” (~\$400, [www.bluemarblegeo.com](http://www.bluemarblegeo.com)). You may find some on CAD user websites and forums as well. Some AutoCAD versions can convert data as well.

VDOT also has a CD of roads that can be provided at no cost. One disadvantage to using these data is that only Route Numbers are shown, not Street Names as in the data described above. An advantage is that this data is already in DXF format, eliminating the need for a conversion program for CAD software. You may request this CD from VDOT’s NoVa GIS Section, contact Larry Camp at [larry.camp@virginiadot.org](mailto:larry.camp@virginiadot.org) or 703-383-2249.

## METHOD 2 – TEXT FILE

### 1) GIS REQUIREMENT

- e) Submit a text file (.txt) with a coordinate indicating the location of your project.
- f) Media type: 3.5 floppy
- g) File Type: .txt format, created in “Notepad”. See example below.
- h) All coordinates must be in:
  - Virginia State Plane Coordinate System (ie., not Latitude/Longitude)
  - North Zone
  - Datum: NAD1983
  - Units: U.S. Survey Feet.

### 2) INSTRUCTIONS

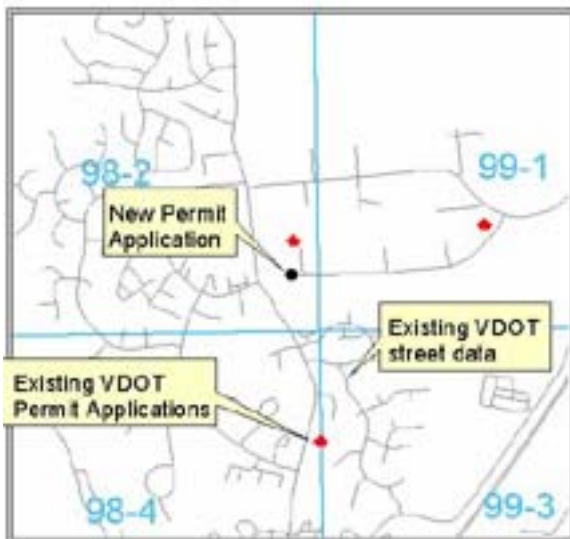
**This method is beneficial for those with CAD programs for their surveying and design functions, who don’t wish to purchase GIS data or software. It assumes that the coordinate of the work site is already known from prior surveys and design work.**

- a) Using a text editor such as Notepad, create a text file with two lines in it. The first line is the “header” line, and the second is the “coordinate” line.
- b) Give each coordinate the ID of “1” as in the example.

#### **Example:**

ID,X,Y	(no spaces between characters or commas)
1,11852647,6987291	(no spaces between numbers)

- c) Save this as a .txt file in Notepad (ex. Job123.TXT)
- d) Put this file on diskette and provide to VDOT with your permit application.
- e) Label your diskette with the name of your file and the file extension .TXT



Screen view of VDOT’s GIS system. The black dot represents the location of a new Permit application. After processing, the new point is added to the layer shown in red.

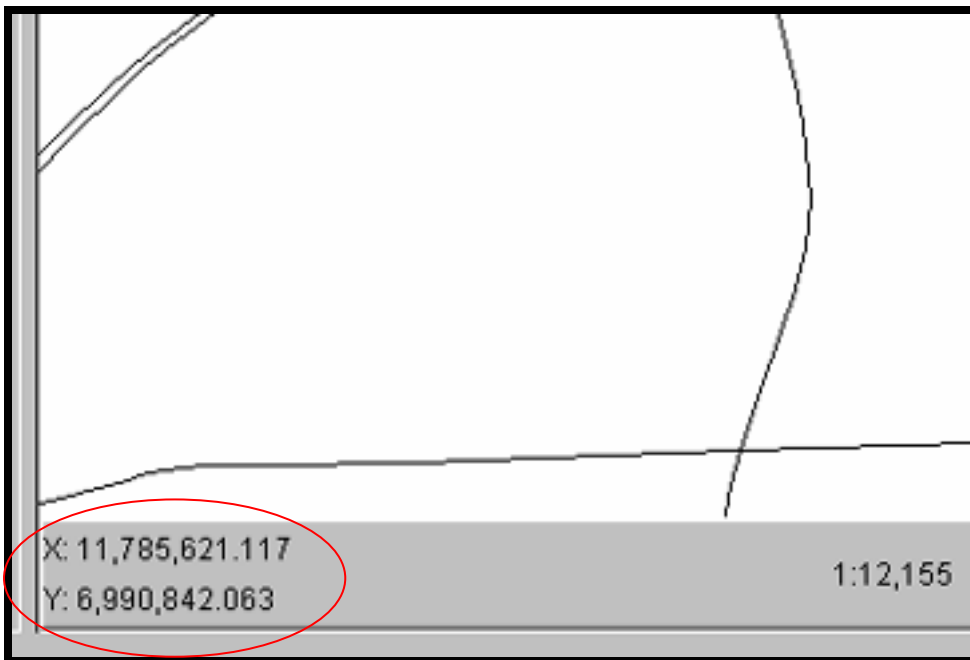
**For those without CAD or surveying software**, or other ways of obtaining the coordinates, the following method may be used as well. It involves using free GIS software and either VDOT Road Data or Fairfax County GIS data (both described in Method 1 above).

Download **ArcExplorer 2.0** or **3.1** from [www.esri.com/software/arcexplorer/index.html](http://www.esri.com/software/arcexplorer/index.html). This is a free GIS software that will allow you to view GIS data such as the VDOT Roads, and obtain coordinates for any point location. You won't be able to create or edit data with this software, but you can view data and obtain the coordinate information necessary for creating the text files (Method 2) for submission to Fairfax Permits.

It can take some time to get familiar and comfortable working with ArcExplorer or Arcview in order to display the streets, route labels, and coordinates as desired by using the various menu options and scale factors. A complete Help section is available.

**How to meet this GIS Requirement:**

- Open ArcExplorer
- Load the street layer
- Zoom to your work location
- Read the coordinates from ArcExplorer
- Type the coordinates into Notepad as specified
- Save to disk and send to VDOT with application



**Read coordinates from ArcExplorer and type them into Notepad.**